Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449/PTO		Complete if Known		
	Application Number	10/810,963		
O I INFORMATION DISCLOSURE	Filing Date	March 26, 2004		
STATEMENT BY APPLICANT	First Named Inventor	Rueckes, Thomas et al.		
JAN 0 5 2005	Art Unit	2818		
JAN U 3 ZWW O	Examiner Name	TBA		
Sheet of 4	Attorney Docket Number	112020.146US2 NAN-22		

MADO		U.	S. PATENT DOCUM	MENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2(f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
DN		US-2004/0085805A1	05-06-2004	SEGAL et al.	
ON,		US-2004/0159833A1	08-19-2003	RUECKES et al.	
ON		US-2004/0164289A1	08-26-2003	RUECKES et al.	
on,		US-2004/0191978A1	09-30-2004	RUECKES et al.	
ron		US-2004/0214366 A1	10-28-2004	SEGAL et al.	
m		US-2004/0214367 A1	10-28-2004	SEGAL et al.	
NON		US-2003/0021966	01-30-2003	SEGAL et al.	
ON		US-2003/0124325	07-30-2003	RUECKES et al.	
DN		US-2003/0165074A1	09-04-2003	SEGAL et al.	
DN		US-2003/0234407A1	12-25-2003	VOGELI et al.	
DN		US-2003/0236000A1	12-25-2003	VOGELI et al.	
DN		US 2002/0179434 A1	12-05-2002	DAI et al.	
DN		US 2002/0172963 A1	11-21-2002	KELLEY et al.	
PN		US 2002/0130311 A1	09-19-2002	LIEBER et al.	
ION		US 2002/0130353 A1	09-19-2002	LIEBER et al.	
DN		US-3,448,302	06-03-1969	SHANFIELD	
DN		US-4,845,533	07-04-1989	PRYOR et al.	
PN		US-4,876,667	10-24-1989	ROSS et al.	
10N		US-6,044,008	03-28-2000	CHOI	
PN		US-6,128,214	10-03-2000	KUEKES et al.	
av		US-6,159,620	12-12-2000	HEATH et al.	
Ind		US-6,183,714	02-06-2000	SMALLEY et al.	
en		US-6,198,655	03-06-2001	HEATH et al.	
DOV		US-6,221,330 B1	04-24-2001	MOY et al.	
BN/	,	US-6,232,706	05-15-2001	DAI et al.	
:DN		US-6,445,006	09-03-2002	BRANDES et al.	

				,
Examiner Signature	Mynywood	Date Considered	11/02	05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'See Kinds Codes of USPTO Patent Documents at www.usplo.gog or MPEP 901.04. 'Enter Office that issued the document, by the two-letter code (WiPO Standard ST.3). 'For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WiPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

This collection of Information is required by 37 CFR 1.97 and 1.98. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is established to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for	or form 1449/PTO			Complete if Known		
1				Application Number	10/810,963	
	INFORMATIO	N C	ISCLOSURE	Filing Date	March 26, 2004	
	STATEMENT	BY	APPLICANT	First Named Inventor	Rueckes, Thomas et al.	
1	(Use as many s	heets	as necessary)	Art Unit	2818	
1				Examiner Name	TBA	
Sheet	2	of	4	Attorney Docket Number	112020.146US2 NAN-22	

ON	US-6,518,156 B1	02-11-2003	CHEN	
DW	US-6,559,468 B1	05-06-2003	KUEKES et al.	
en .	US-6,574,130	09-04-2003	SEGAL et al.	
ian	US-6,643,165	11-04-2003	SEGAL et al.	
PN/	US-6,706,402	03-16-2004	RUECKES et al.	
bN/	US-6,750,471B2	06-15-2004	BETHUNE et al.	
PON	US-6,759,693	07-06-2004	VOGELI et al.	
1000	US-6,673,424 B1	01-06-2004	LINDSAY	
pon	US-6,774,052	08-10-2004	VOGELI et al.	
m)	US-6,781, 166 B1	08-24-2004	LIEBER et al.	
m	US-6,784,028	08-31-2004	RUECKES et al.	

	FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite	Document Number	Publication Date	Name of Patentee or Applicant	Pages, Columns, Lines,			
	No.' Number-Kind Code ^{2(# known)}	Number-Kind Code ^{2(# known)}	MM-DD-YYYY	of Cited Document	Where Relevant Passages or Relevant Figures Appear			
M		WO 01/44796 A1	06-21-2001	Board of Trustees of the Leland Stanford Junior. University.				
DW		WO 01/03208 A1	01-11-2001	President and Fellows of Harvard College				

	NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²		
· DN	A1	CHOI, W. B. et al., "Carbon-nanotube-based nonvolatile memory with oxide- nitride-film and nanoscale channel." Appl. Phys. Lett., 2003, Vol. 82(2) 275-277.			
. DN	A2	DEQUESNES, M. et al., "Calculation of pull-in voltages for carbon-nanotube-based nanoelectromechanical switches." Nanotechnology, 2002, Vol. 13, 120-131.			
DN	АЗ	DEQUESNES, M. et al., "Simulation of carbon nanotube-based nanoelectromechanical switches." Computational Nanoscience and Nanotechnology, 2002, 383-386.			

	 <u> </u>	7			
Examiner	1 and and But	Date	1	100	/
Signature	C guegoonie.	Consider	ed//_	00	03

EXAMINER: Initial if reference considered, whether or not obtation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'See Kinds Codes of USPTO Patent Documents at www.usplo.gov or MPEP 901.04. 'Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 'For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is established to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute fo	r form 1449/PTO				Complete if Known
				Application Number	10/810,963
1	INFORMATIO			Filing Date	March 26, 2004
	STATEMENT	TBY A	APPLICANT	First Named Inventor	Rueckes, Thomas et al.
	(Use as many	sheets at	s necessary)	Art Unit	2818
				Examiner Name	TBA
Sheet	3	of	4	Attorney Docket Number	112020.146US2 NAN-22

DN	A4	WOLF, S., Silicon Processing for the VLSI Era; Volume 2 – Process Integration, Multi-Level-Interconnect Technology for VLSI and ULSI, 1990, Section 4.3 Materials for Multilevel Interconnect Technologies, pp. 189-191, Lattice Press, Sunset Beach	
DN	A5	WOLF, S., Silicon Processing for the VLSI Era; Volume 2 – Process Integration, 1990, Section 4.7 Manufacturing Yield and Reliability Issues of VLSI Interconnects, pp. 260-273, Lattice Press, Sunset Beach	
DN	A6	ROBINSON, L.A.W., "Self-Aligned Electrodes for Suspended Carbon Nanotube Structures." <i>Microelectronic Engineering</i> , 2003, Vols. 67-68, 615-622.	
bW	A7	TOUR, J. M. et al., "NanoCell Electronic Memories." J. Am. Chem Soc., 2003, Vol. 125, 13279-13283.	
'DN	A8	RUECKES, T., et al., "Carbon Nanotube-Based Nonvolatile Random Access Memory for Molecular Computing" Science, 2000, Vol. 289, 94-97.	
DN	A9	FAN, S. et al., "Carbon nanotube arrays on silicon substrates and their possible application." <i>Physica E</i> , 2000, Vol. 8, 179-183.	
DN	A10	ZHAN, W. et al., "Microelectrochemical Logic Circuits." J. Am. Chem. Soc., 2003, Vol. 125, 9934-9935.	
⊅√	A11	SOH, H. T. et al., "Integrated nanotube circuits: Controlled growth and ohmic contacting of single-walled carbon nanotubes." Appl. Phys. Lett., 1999, Vol. 75(5) 627-629.	
DW	A12	KINARET, J.M. et al., "A carbon-nanotube-based nanorelay", Appl. Phys. Lett., 2003, Vol. 82(8) 1287-1289.	
DN	A13	FRANKLIN, N. R. et al., "Integration of suspended carbon nanotube arrays into electronic devices and electromechanical systems." <i>Appl. Phys. Lett.</i> , 2002, Vol. 81(5) 913-915.	
DH	A14	AVOURIS, P., "Carbon nanotube electronics," Chem. Physics, 2002, Vol. 281, pp. 429-445.	
DN	A15	DAI, H. et al., "Controlled Chemical Routes to Nanotube Architectures, Physics, and Devices." J. Phys. Chem. B, 1999, Vol. 103, 111246-11255.	
· DN	A16	HOMMA, Y. et al., "Growth of Suspended Carbon Nanotubes Networks on 100-nm-scale Silicon Pillars." Appl. Phys. Lett., 2002, Vol. 81(12) 2261-2263.	
.bM	A17	AJAYAN, P.M., et al., "Nanometre-size tubes of carbon." Rep. Prog. Phys., 1997, Vol. 60, 1025-1062.	
bN	A18	SREEKUMAR, T.V., et al., "Single-wall Carbon Nanotube Films", Chem. Mater. 2003, Vol. 15, 175-178.	

Examiner Signature Date Considered 11/02/05

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'See Kinds Codes of USPTO Patent Documents at www.uspto.org or MPEP 901.04. 'Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 'For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as Indicated on the document under WIPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is established to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it contains a valid OMP control number.

Substitute for	r form 1449/PTO			Complete if Known		
				Application Number	10/810,963	
l.	INFORMATIO			Filing Date	March 26, 2004	
	STATEMENT	BY	APPLICANT	First Named Inventor	Rueckes, Thomas et al.	
	(Use as many si	heets	as necessary)	Art Unit	2818	
				Examiner Name	TBA	
Sheet	4	of	4	Attorney Docket Number	112020.146US2 NAN-22	

	A19	VERISSIMO-ALVES, M. et al., "Electromechanical effects in carbon nanotubes: Ab initio and analytical tight-binding calculations." Phys. Rev. B, 2003, Vol. 67,	
DN		161401-1 - 161401-4.	
n 1	A20	FUHRER, M.S. et al., "High-Mobility Nanotube Transistor Memory." Nano Letters,	
DN		2002, Vol. 2(7) 755-759.	
e/	A21	RADOSAVLJEVIC, M. et al., "Nonvolatile molecular memory elements based on	ļ
Mag	1.2.	ambipolar nanotube field effect transistors." Nano Letters, 2002, Vol. 2(7) 761-764.	
:		FARAJIAN, A. A. et al., "Electronic transport through bent carbon	Ī
DN	A22	nanotubes: Nanoelectromechanical sensors and switches." Phys. Rev.	.
•		B, 200,. Vol. 67, 205423-1 - 205423-6.	
		FISCHER, J.E. et al., "Magnetically aligned single wall carbon nanotube films:	
DN	A23	Preferred orientation and anisotropic transport properties." Journal of Appl. Phys.,	
D 14		2003, Vol. 93(4) 2157-2163.	
Ĉ.	404	LEE, K.H. et al., "Control of growth orientation for carbon nanotubes." Appl. Phys.	
DN	A24	Lett., 2003, 82 (3) 448-450.	
- i	A25	CASAVANT, M.J. et al., "Neat macroscopic membranes of aligned carbon	
DN	A25	nanotubes." Journal of Appl. Phys., 2003, Vol. 93(4) 2153-2156.	
,	400	AMI, S. et al., "Logic gates and memory cells based on single C ₆₀ electromechanical	
Ma	A26	transistors." Nanotechnology, 2001, Vol. 12, 44-52.	
]	407	DEHON, A., "Array-Based Architecture for FET-Based, Nanoscale Electronics."	
DN	A27	IEEE Transactions on Nanotechnology, 2003, Vol. 2(1) 23-32.	
	400	TANS, S. et al., "Room-temperature transistor based on a single carbon nanotube."	
DN	A28	Nature, 1998, Vol. 393, 49-52.	
/	400	CUI, J.B. et al., "Carbon Nanotube Memory Devices of High Charge Storage	
BN	A29	Stability." Appl. Phys. Lett., 2002, Vol. 81(17) 3260-3262.	

		/	
Examiner	11) - 11 - 11/07/11	Date	4/27 /05
Signature		Considered	11 10 2 03

Signature

EXAMINER: Initial if reference considered, whether of not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 2see Kinds Codes of USPTO Patent Documents at www.usple.cog or MPEP 901.04. Senter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is established to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Heduction Act of 1995, no person are required to respond to a collection of information unless it contains a valid CMB control number.							
Substitute for form 1449/PTO					Complete if Known		
	INFORMATIO	ND	ISCLOSURE	Application No.	10/810,963		
STATEMENT BY APPLICANT (Use as many sheets as necessary)			APPLICANT	Filing Date	March 26, 2004		
			as necessary)	First Named Inventor	RUECKES, et al.		
				Art Unit	2818		
				Examiner Name	TBA		
Sheet	1	of	1	Attorney Docket Number	112020.146 US2 NAN-22		

		U	. S. PATENT DOCUM	MENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2(If known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
JAN.		US-2004/0175856 A1	09-09-2004	JAIPRAKASH et al.	
OIN	6	US-2004/0181630 A1	09-16-2004	JAIPRAKASH et al.	
ON	8	US-2005/0041465 A1	02-24-2005	RUECKES et al.	
APR 7 200	397	US-2005/0047244 A1	03-03-2005	RUECKES et al.	
DIV.	C	US-2005/0056877 A1	03-17-2005	RUECKES et al.	
TRAPPAN S		US-6,548,841	04-15-2003	FRAZIER et al.	
DN		US-6,803,840	10-12-2004	HUNT et al.	
on		US-6,809,465	10-26-2004	JIN	
		US-			
			REIGN PATENT DOC		Pages, Columns, Lines,
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Where Relevant Passages
	140.	Number-Kind Code ^{2(# known)}			or Relevant Figures Appear
DN	<u> </u>	WO 04/065657 A1	08-05-2004	Nantero, Inc.	
	+				

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	

Examiner Date 1//07/05						
Signature Considered Considered	Examiner	Mynynthe	Date Considered	il	102	105

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'See Kinds Codes of USPTO Patent Documents at www.usblo.gog/ or MPEP 901.04. 'Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 'For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is established to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. VA 22313-1450.